
NASA-11165 (December 2003)
NATIONAL AERONAUTICS NASA
AND SPACE ADMINISTRATION Superseding NASA-11165
(March 2003)

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SECTION 11165

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12/03

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SECTION 11165

DOCK BUMPERS
12/03

NOTE: Delete, revise, or add to the text in this section to cover project requirements. Notes are for designer information and will not appear in the final project specification.

This section covers resilient, laminated, rubberized-fabric, dock bumper pads.

Verify that drawings include locations of dock bumpers.

Dock levelers are specified in Section 11161 DOCK LEVELERS.

PART 1 GENERAL

1.1 REFERENCES

NOTE: The following references should not be manually edited except to add new references. References not used in the text will automatically be deleted from this section of the project specification.

The publications listed below form a part of this section to the extent referenced:

ASTM INTERNATIONAL (ASTM)

ASTM A 123/A 123M (2002) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

ASTM D 2000 (2001) Standard Classification System for Rubber Products in Automotive Applications

1.2 SUBMITTALS

NOTE: Review submittal description (SD) definitions in Section 01330 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project. Submittals should be kept to the minimum required for adequate quality control. Include a columnar list of appropriate products and tests beneath each submittal description.

The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES in sufficient detail to show full compliance with the specification:

SD-02 Shop Drawings

Fabrication drawings for dock bumpers shall be in accordance with the paragraph entitled, "Dock Bumpers," of this section.

Installation drawings for Dock Bumpers shall show details of anchorage.

SD-04 Samples

Contractor shall provide the following samples:

One each of Fastening Materials, Angles, Rods, and Fastening Hardware, individually tagged and identified for use and location

One typical Loading Dock Bumpers completely assembled with supporting rods, end angles, bolts, and nuts. (This may be the smallest size bumper required.)

One section of Dock Bumpers 8 inches 203 millimeter wide by full depth and height of bumper including one end angle with the opposite end exposed for inspection

Sample of [Rubber] [Rubberized Fabric] for bumper

SD-07 Certificates

Certificates shall be submitted for the following items showing conformance with the referenced standards contained in this section.

Fastening Materials
Rubberized Fabric
Steel Angles
Hardware Items

1.3 DESIGN AND GRADES OF MATERIAL

Design, material, fabrication, and assembly shall conform to approved drawings and samples, and the requirements specified.

PART 2 PRODUCTS

2.1 DOCK BUMPERS

Bumpers shall be constructed of resilient, laminated, rubberized-fabric pads, assembled on steel frames. Rubberized Fabric shall conform to ASTM D 2000. Material shall be punched to receive 3/4 inch 20 millimeter supporting rods. Bumpers shall be 4-1/2 inches 115 millimeter thick, stand out from the dock, and be closed with two structural steel angles under 1,500 pounds 6895 pascal.

Solid Rubber pieces may be used instead of rubberized fabric. Solid rubber shall conform to ASTM D 2000, Grade 4AA612A13B13F17.

2.2 STEEL ANGLES

Angles shall be 3 by 2-1/2 by 1/4 inch 75 by 65 by 6 millimeter steel welded to 3/4 inch 20 millimeter Rods at one end (head of rods exposed on face of angle leg) and closed with Fastening Materials, to include threaded rod ends and fastening hardware at the other end. Quantity of rods required for each bumper shall be as indicated and in accordance with approved drawings. The 2-1/2 inch 65 millimeter leg of the steel angle on the face of the wall shall have 13/16 inch M20 bolt holes, quantity and spacing as required.

2.3 FINISH

Metal for dock bumpers, including Hardware Items, shall be hot-dip galvanized conforming to ASTM A 123/A 123M.

PART 3 EXECUTION

3.1 INSTALLATION

Loading Dock Bumpers shall be installed in accordance with the manufacturer's written instructions.

-- End of Section --